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<141>   2005-01-21

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Tyr Ser


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Phe Ser


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coding region

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tgcctgttgc caaagctcga tgaacttcgg gatgaaggga aggcttcgtc tgccaaacag    660
agactcaagt gtgccagtct ccaaaaattt ggagaaagag ctttcaaagc atgggcagta    720
gctcgcctga gccagagatt tcccaaagct gagtttgcag aagtttccaa gttagtgaca    780
gatcttacca aagtccacac ggaatgctgc catggagatc tgcttgaatg tgctgatgac    840
agggcggacc ttgccaagta tatctgtgaa aatcaagatt cgatctccag taaactgaag    900
gaatgctgtg aaaaacctct gttggaaaaa tcccactgca ttgccgaagt ggaaaatgat    960
gagatgcctg ctgacttgcc ttcattagct gctgattttg ttgaaagtaa ggatgtttgc   1020
aaaaactatg ctgaggcaaa ggatgtcttc ctgggcatgt ttttgtatga atatgcaaga   1080
aggcatcctg attactctgt cgtgctgctg ctgagacttg ccaagacata tgaaaccact   1140
ctagagaagt gctgtgccgc tgcagatcct catgaatgct atgccaaagt gttcgatgaa   1200
tttaaacctc ttgtggaaga gcctcagaat ttaatcaaac aaaattgtga gcttttgag    1260
cagcttggag agtacaaatt ccagaatgcg ctattagttc gttacaccaa gaaagtaccc   1320
caagtgtcaa ctccaactct tgtagaggtc tcaagaaacc taggaaaagt gggcagcaaa   1380
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ctgaaccagt tatgtgtgtt gcatgagaaa acgccagtaa gtgacagagt caccaaatgc   1500
tgcacagaat ccttggtgaa caggcgacca tgctttcag ctctggaagt cgatgaaaca   1560
tacgttccca aagagtttaa tgctgaaaca ttcaccttcc atgcagatat atgcacactt   1620
tctgagaagg agagacaaat caagaaacaa actgcacttg ttgagctcgt gaaacacaag   1680
cccaaggcaa caaaagagca actgaaagct gttatggatg atttcgcagc ttttgtagag   1740
aagtgctgca aggctgacga taaggagacc tgctttgccg aggagggtaa aaaacttgtt   1800
gctgcaagtc aagctgcctt aggctta                                       1827
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<210>    23
<211>    47
<212>    DNA
<213>    Artificial Sequence

<220>
<223>    Synthetic oligonucleotide leader sequence

<400>    23
ctaaagagaa aaagaatgga gacgatgaat acccacttca tctttgc                 47

<210>    24
<211>    72
<212>    DNA
<213>    Artificial Sequence

<220>
<223>    Synthetic oligonucleotide leader sequence

<400>    24
atgaagtggg tattcatcgt ctccattctt tttctcttta gctcggctta ttccaggagc   60
ttggataaaa ga                                                       72

<210>    25
<211>    1827
<212>    DNA
<213>    Artificial Sequence

<220>
<223>    Synthetic oligonucleotide leader sequence and mature human albumin coding
region

<400>    25
atgaagtggg tattcatcgt ctccattctt tttctcttta gctcggctta ttccaggagc   60
ttggataaaa gagatgcaca caagagtgag gttgctcatc ggtttaaaga tttgggagaa   120
gaaaatttca aagccttggt gttgattgcc tttgctcagt atcttcagca gtgtccattt   180
gaagatcatg taaaattagt gaatgaagta actgaatttg caaaaacatg tgttgctgat   240
gagtcagctg aaaattgtga caaatcactt catacccttt ttggagacaa attatgcaca   300
gttgcaactc ttcgtgaaac ctatggtgaa atggctgact gctgtgcaaa acaagaacct   360
gagagaaatg aatgcttctt gcaacacaaa gatgacaacc caaacctccc ccgattggtg   420
agaccagagg ttgatgtgat gtgcactgct tttcatgaca atgaagagac attttttgaaa 480
aaatacttat atgaaattgc cagaagacat ccttactttt atgccccgga actccttttc   540
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```
tttgctaaaa ggtataaagc tgcttttaca gaatgttgcc aagctgctga taaagctgcc    600
tgcctgttgc caaagctcga tgaacttcgg gatgaaggga aggcttcgtc tgccaaacag    660
agactcaagt gtgccagtct ccaaaaattt ggagaaagag ctttcaaagc atgggcagta    720
gctcgcctga gccagagatt tcccaaagct gagtttgcag aagtttccaa gttagtgaca    780
gatcttacca aagtccacac ggaatgctgc catggagatc tgcttgaatg tgctgatgac    840
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gaatgctgtg aaaaacctct gttggaaaaa tcccactgca ttgccgaagt ggaaaatgat    960
gagatgcctg ctgacttgcc ttcattagct gctgattttg ttgaaagtaa ggatgtttgc   1020
aaaaactatg ctgaggcaaa ggatgtcttc ctgggcatgt ttttgtatga atatgcaaga   1080
aggcatcctg attactctgt cgtgctgctg ctgagacttg ccaagacata tgaaaccact   1140
ctagagaagt gctgtgccgc tgcagatcct catgaatgct atgccaaagt gttcgatgaa   1200
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cagcttggag agtacaaatt ccagaatgcg ctattagttc gttacaccaa gaaagtaccc   1320
caagtgtcaa ctccaactct tgtagaggtc tcaagaaacc taggaaaagt gggcagcaaa   1380
tgttgtaaac atcctgaagc aaaaagaatg ccctgtgcag aagactatct atccgtggtc   1440
ctgaaccagt tatgtgtgtt gcatgagaaa acgccagtaa gtgacagagt caccaaatgc   1500
tgcacagaat ccttggtgaa caggcgacca tgctttttcag ctctggaagt cgatgaaaca   1560
tacgttccca aagagtttaa tgctgaaaca ttcaccttcc atgcagatat atgcacactt   1620
tctgagaagg agagacaaat caagaaacaa actgcacttg ttgagctcgt gaaacacaag   1680
cccaaggcaa caaaagagca actgaaagct gttatggatg atttcgcagc ttttgtagag   1740
aagtgctgca aggctgacga taaggagacc tgctttgccg aggagggtaa aaaacttgtt   1800
gctgcaagtc aagctgcctt aggctta                                        1827
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<210> 26
<211> 1827
<212> DNA
<213> Artificial Sequence

<220>
<223>   Synthetic oligonucleotide plasmid sequence

<400>   26
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ttggataaga gagacgctca caagtccgga gtcgctcaca gattcaagga cttgggtgaa    120
gaaaacttca aggctttggt cttgatcgct ttcgctcaat acttgcaaca atgtccattc    180
gaagatcacg tcaagttggt caacgaagtt accgaattcg ctaagacttg tgttgctgac    240
gaatctgctg aaaactgtga caagtccttg cacaccttgt tcggtgataa gttgtgtact    300
gttgctacct tgagagaaac ctacggtgaa atggctgact gttgtgctaa gcaagaacca    360
gaaagaaacg aatgtttctt gcaacacaag gacgacaacc caaacttgcc aagattggtt    420
agaccagaag ttgacgtcat gtgtactgct ttccacgaca acgaagaaac cttcttgaag    480
aagtacttgt acgaaattgc tagaagacac ccatacttct acgctccaga attgttgttc    540
ttcgctaaga gatacaaggc tgctttcacc gaatgttgtc aagctgctga taaggctgct    600
tgtttgttgc caaagttgga tgaattgaga gacgaaggta ggcttcttc cgctaagcaa    660
agattgaagt gtgcttcctt gcaaaagttc ggtgaaagag ctttcaaggc ttgggctgtc    720
gctagattgt ctcaaagatt cccaaaggct gaattcgctg aagtttctaa gttggttact    780
gacttgacta aggttcacac tgaatgttgt cacggtgact tgttggaatg tgctgatgac    840
agagctgact ggctaagta catctgtgaa aaccaagact ctatctcttc caagttgaag    900
gaatgttgtg aaaagccatt gttggaaaag tctcactgta ttgctgaagt tgaaaacgat    960
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caagtctcca ccccaacttt ggttgaagtc tctagaaact tgggtaaggt cggttctaag   1380
tgttgtaagc acccagaagc taagagaatg ccatgtgctg aagattactt gtccgtcgtt   1440
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tgtactgaat ctttggttaa cagaagacca tgtttctctg ctttggaagt cgacgaaact   1560
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tccgaaaagg aaagacaaat taagaagcaa actgctttgg ttgaattggt caagcacaag   1680
ccaaaggcta ctaaggaaca attgaaggct gtcatggatg atttcgctgc tttcgttgaa   1740
aagtgttgta aggctgatga taaggaaact tgtttcgctg aagaaggtaa gaagttggtc   1800
gctgcttccc aagctgcttt gggttttg                                        1827
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<210> 27
<211> 72
<212> DNA
<213> Artificial Sequence

<220>
<223>   Synthetic oligonucleotide leader sequence

<400>   27
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ttggataaga ga   72

<210>   28
<211>   11
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Synthetic oligonucleotide secretion pre-sequence

<400>   28
Met Lys Trp Val Val Ser Ser Ser Ala Tyr Ser
1   5   10

<210>   29
<211>   5
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Synthetic polypeptide leader sequence

<220>
<221>   MISC_FEATURE
<222>   1
<223>   CAN BE EITHER Phe OR Trp OR Tyr

<220>
<221>   MISC_FEATURE
<222>   2
<223>   CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<220>
<221>   MISC_FEATURE
<222>   3
<223>   CAN BE EITHER Leu OR Val OR Ala OR Met

<220>
<221>   MISC_FEATURE
<222>   5
<223>   CAN BE EITHER Ile OR Val OR Ala OR Met

<400>   29
Xaa Xaa Xaa Thr Xaa
1   5

<210>   30
<211>   15
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Synthetic polypeptide secretion pre-sequence

<400>   30
Leu Phe Leu Phe Ser Ser Ala Tyr Ser Arg Gly Val Phe Arg Arg
1   5   10   15

<210>   31
<211>   24
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Synthetic polypeptide secretion pre-sequence

<220>
<221>   MISC_FEATURE
<222>   5
<223>   any amino acid PREFERABLY Phe

<220>
<221>   MISC_FEATURE
<222>   6
<223>   any amino acid PREFERABLY Ile

<220>
<221>   MISC_FEATURE
<222>   7
<223>   any amino acid PREFERABLY Val

<220>
<221>   MISC_FEATURE
<222>   8
<223>   any amino acid PREFERABLY Ser or Thr

<220>
<221>   MISC_FEATURE
<222>   9
<223>   any amino acid PREFERABLY Ile

<400>   31
Met Lys Trp Val Xaa Xaa Xaa Xaa Xaa Leu Phe Leu Phe Ser Ser Ala
1   5   10   15

Tyr Ser Arg Gly Val Phe Arg Arg
            20

<210>   32
<211>   24
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Synthetic polypeptide secretion pre-pro sequence

<400>   32
Met Lys Trp Val Phe Ile Val Ser Ile Leu Phe Leu Phe Ser Ser Ala
1   5   10   15

Tyr Ser Arg Ser Leu Asp Lys Arg
            20

<210>   33
<211>   4
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Synthetic polypeptide secretion pre-sequence

<220>
<221>   MISC_FEATURE
<222>   2
<223>   CAN BE EITHER Lys OR Arg OR His

<220>
<221>   MISC_FEATURE
<222>   3
<223>   CAN BE EITHER Phe OR Trp OR Tyr

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<220>
<221>    MISC_FEATURE
<222>    4
<223>    CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<400>    33
Met Xaa Xaa Xaa
1


<210>    34
<211>    15
<212>    DNA
<213>    Artificial Sequence

<220>
<223>    Synthetic oligonucleotide leader Sequence

<400>    34
ttcatcgtct ccatt                                                    15


<210>    35
<211>    36
<212>    DNA
<213>    Artificial Sequence

<220>
<223>    Synthetic oligonucleotide primer

<400>    35
gcatgcggcc gcccgtaatg cggtatcgtg aaagcg                             36


<210>    36
<211>    35
<212>    DNA
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<220>
<223>    Synthetic oligonucleotide primer

<400>    36
gcataagctt acccacttca tctttgcttg tttag                              35


<210>    37
<211>    11
<212>    DNA
<213>    Artificial Sequence

<220>
<223>    Synthetic oligonucleotide linker

<400>    37
ttaggcttat a                                                        11


<210>    38
<211>    12
<212>    DNA
<213>    Artificial Sequence

<220>
<223>    Synthetic oligonucleotide linker

<400>    38
ccgaatattc ga                                                       12


<210>    39
<211>    40
<212>    DNA
<213>    Artificial Sequence
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<220>
<223>   Synthetic oligonucleotide primer

<400>   39
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<210>   40
<211>   1865
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   S. cerevisiae 5'UTR and synthetic oligonucleotide leader sequence and
mature human albumin CDS

<400>   40
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cttgttctcc tctgcttact ctagatcttt ggataagaga gacgctcaca agtccgaagt   120
cgctcacaga ttcaaggact tgggtgaaga aaacttcaag gctttggtct tgatcgcttt   180
cgctcaatac ttgcaacaat gtccattcga agatcacgtc aagttggtca acgaagttac   240
cgaattcgct aagacttgtg ttgctgacga atctgctgaa aactgtgaca agtccttgca   300
caccttgttc ggtgataagt tgtgtactgt tgctaccttg agagaaacct acggtgaaat   360
ggctgactgt tgtgctaagc aagaaccaga aagaaacgaa tgtttcttgc aacacaagga   420
cgacaaccca aacttgccaa gattggttag accagaagtt gacgtcatgt gtactgcttt   480
ccacgacaac gaagaaacct tcttgaagaa gtacttgtac gaaattgcta gaagacaccc   540
atacttctac gctccagaat tgttgttctt cgctaagaga tacaaggctg ctttcaccga   600
atgttgtcaa gctgctgata aggctgcttg tttgttgcca aagttggatg aattgagaga   660
cgaaggtaag gcttcttccg ctaagcaaag attgaagtgt gcttccttgc aaaagttcgg   720
tgaaagagct ttcaaggctt gggctgtcgc tagattgtct caaagattcc caaaggctga   780
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ccaagactct atctcttcca agttgaagga atgttgtgaa aagccattgt tggaaaaagtc   960
tcactgtatt gctgaagttg aaaacgatga aatgccagct gacttgccat ctttggctgc   1020
tgacttcgtt gaatctaagg acgtttgtaa gaactacgct gaagctaagg acgtcttctt   1080
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cgaatgttac gctaaggttt tcgatgaatt caagccattg gtcgaagaac cacaaaactt   1260
gatcaagcaa aactgtgaat tgttcgaaca attgggtgaa tacaagttcc aaaacgcttt   1320
gttggttaga tacactaaga aggtcccaca agtctccacc ccaactttgg ttgaagtctc   1380
tagaaacttg ggtaaggtcg gttctaagtg ttgtaagcac ccagaagcta agagaatgcc   1440
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caccttccac gctgatatct gtaccttgtc cgaaaaggaa agacaaatta agaagcaaac   1680
tgctttggtt gaattggtca gcacaagcc aaaggctact aaggaacaat tgaaggctgt   1740
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agctt   1865